REMARKS

The above Amendments and these Remarks are submitted under 35 U.S.C. § 132 and 37 C.F.R. § 1.111 in response to the Office Action mailed June 4, 2004. Claims 1-41 remain in this application. The Examiner has rejected Claims 1, 7-13, 15, 17, 21, 22, and 24-41 as being anticipated under 35 U.S.C. § 102(a). The Examiner has objected to Claims 2-6, 14, 16, and 18 as being dependent upon a rejected base claim, but indicated these claims would be allowable if rewritten in independent form. The Examiner has allowed Claims 19, 20 and 23. By this Amendment, Claims 1, 13, 15, 17, 21 and 22 have been amended to more clearly claim what Applicant regards as his invention. Reconsideration and allowance of all claims, as amended, is respectfully requested.

Rejection under 35 U.S.C. § 102(a):

The Examiner has rejected Claims 1, 7-13, 15, 17, 21, 22, and 24-41 under 35 U.S.C. § 102(a) as being anticipated by the prior art Figures 1 and 2 of this application. Among other aspects of the teachings found in these Figures, the Examiner contends that these Figures teach the following:

"an RF head ... configured during a receive mode ... to convert said RF signal into a modulated baseband analog signal for baseband processing in said host computing device..."

"said RF head configured during a transmit mode to receive a modulated baseband analog signal generated by said host computing device..."

"said interface further configured during said receive mode to feed said modulated baseband analog signal generated by said RF head to said host computing device, such that said baseband processing unit is enabled to convert said modulated baseband analog signal into a plurality of bits of data including protocol data and true data, and said CPU operating under the control of said protocol stack software program is enabled to separate said protocol data from said true data..."

"said interface further configured during said transmit mode to feed said modulated baseband analog signal generated by said host computing device to said RF head..."

Applicant respectfully disagrees.

The key objective of the present invention is to provide a low cost wireless RF modem by moving certain of the principal modem functions in a novel way from the wireless RF modem and

into its host computing device. The advantage of the present invention is the elimination of hardware in the RF modem that is redundant with hardware found in the host computing device, i.e., the laptop or the like to which the RF modem is connected, thereby enabling the RF modem to have fewer components and to consume less power during operation.

The invention as claimed in Claim 1 is distinguishable from Figures 1 and 2 of the application on this basis. Amendments to Claim 1 have been made to clarify this distinction. As claimed in amended Claim 1, and as seen in Figure 3 of the application, an RF modem according to the present invention includes an antenna, an RF head and an interface. See also the specification beginning on line 13 of page 8. The host computing device to which the RF modem is physically coupled includes a central processing unit (CPU) for executing a protocol stack software program stored in the host computer's memory, and a baseband processing unit. In the prior art shown in Figure 1 of the application, the RF modem includes the CPU and memory for executing the protocol stack software program and the baseband processing unit. As seen in Figure 3, the RF modem according to the present invention does not include this CPU and memory and does not provide the protocol stack software functionality, nor does the RF modem according to the present invention include a baseband processing unit. In other words, Neither Figure 1 nor Figure 2 teach baseband processing in the host computing device, nor do they teach processing of data in the host computing device for performing protocol stack data processing.

In addition, although Figure 1 shows the RF modem as having an interface, this interface is different from the interface as claimed in Claim 1. Specifically, the interface in Claim 1 is configured during a receive mode to feed the modulated baseband analog signal generated by the RF head to said host computing device, such that the baseband processing unit in the host computing device is enabled to convert said modulated baseband analog signal into a plurality of bits of data including protocol data and true data, and thereafter said CPU in the host computing device is enabled under the control of said protocol stack software program, to separate protocol data from true data. The interface is further configured during a transmit mode to feed the modulated baseband analog signal generated by the host computing device to the RF head. By contrast, the interface shown in Figure 1 is designed to feed digital data from that prior art modem to a host computer which already has been processed by a baseband processing unit in the modem and has further been processed to remove protocol bits from the data, such that only "true data" in digital form is coupled to the host computer. In other words, referring to Figure 1, the interface

according to the present invention is between the Dual Conversion Transceiver 150 and the Analog Baseband and CODEC 125 and between the high speed Synthesizer 180 and the Digital Baseband & CPU 170. This novel architecture is clearly shown in Figure 3 at 375.

For all of the above reasons, Applicant respectfully submits that the RF modem as claimed in Claim 1 is not anticipated by the teachings of Figures 1 and 2 of the application, and is therefore allowable in view of these Figures.

Claims 7-12, being dependent either directly or indirectly from Claim 1, are respectfully submitted as being allowable on the same basis as Claim 1. All other claims dependent from Claim 1 are also respectfully submitted as being allowable on this same basis.

Since Claim 13 claims a system including an RF modem whose architecture corresponds to the RF modem claimed in Claim 1, and in addition now claims, as amended, a modem that is detachable from the host computing device, applicant respectfully submits that Claim 13, and all claims dependent therefrom, are also allowable over the teachings of Figures 1 and 2.

Claim 15 claims an RF modem similar to the modem claimed in Claim 1 except that the baseband processing unit is in the RF modem. The protocol stack data processing is still provided by the host computing system. Applicant respectfully submits that Claim 15, and all claims dependent therefrom, are also allowable over the teachings of Figures 1 and 2.

Claim 17 claims a system including an RF modem whose architecture corresponds to the RF modem claimed in Claim 15, and in addition now claims, as amended, a modem that is detachable from the host computing device, applicant respectfully submits that Claim 17, and all claims dependent therefrom, are also allowable over the teachings of Figures 1 and 2.

Claim 21 claims a method for wireless data communications wherein the functionality of the baseband processing unit and the protocol stack processing are provided by a host computing device to which an RF modem is attached. Therefore, for the same reasons as described above for Claim 1, Applicant respectfully submits that the wireless communications method as claimed in Claim 21 is not anticipated by the teachings of Figures 1 and 2 of the application, and is therefore allowable in view of these Figures.

Applicant respectfully submits that all claims dependent from Claim 21, are respectfully submitted as being allowable on the same basis as Claim 21.

Claim 22 claims a method for wireless data communications wherein the functionality of the protocol stack processing is provided by a host computing device to which an RF modem is attached. Therefore, for the same reasons as described above for Claim 15, Applicant respectfully

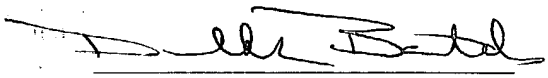
submits that the wireless communications method as claimed in Claim 22 is not anticipated by the teachings of Figures 1 and 2 of the application, and is therefore allowable in view of these Figures.

Applicant respectfully submits that all claims dependent from Claim 22, are respectfully submitted as being allowable on the same basis as Claim 22.

Applicant thanks the Examiner for indicating that Claims 19, 20 and 23 are allowed and that Claims 2-6, 14, 16, and 18 are allowable. Applicant respectfully defers converting the allowable claims into independent claims pending the Examiner's reconsideration of the claims that have been rejected.

Based on the above, Applicants respectfully submit that all pending Claims, Claims 1-41, in the present application are in condition for allowance. Such allowance is respectfully solicited. Applicants respectfully request that a timely Notice of Allowance be issued in this case. If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (650) 739-2800.

Respectfully submitted,



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December 6, 2004
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